

# CATS

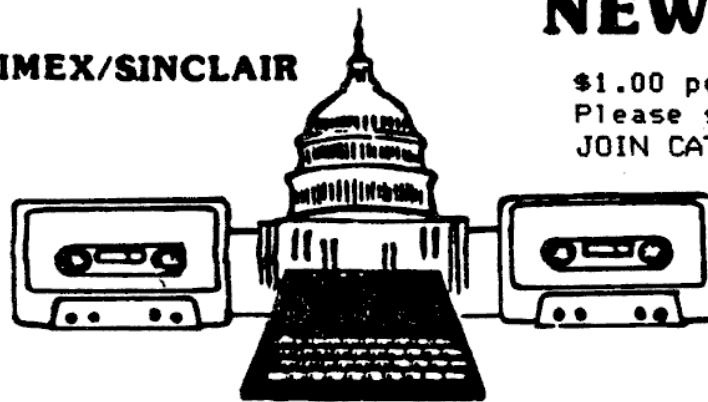
CAPITOL AREA TIMEX/SINCLAIR  
USERS GROUP

# NEWSLETTER

\$1.00 per copy  
Please support your computer  
JOIN CATS!

Volume 5, Number 1

April 1987



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### LOOKING TO THE FUTURE

2nd Annual T/S Computerfest  
May 2-3  
Indianapolis, IN

12th Annual Trenton Computerfest  
April 11-12  
Trenton State College  
Trenton, NJ

### PRESIDENTIAL RAMBLINGS

The Indianapolis Computerfest is upon us, as is the Trenton Hamfest. The Trenton fest is the weekend of our April meeting. There will be a Timex Sinclair session on Sunday afternoon.

The Indianapolis meeting is the first weekend in May. There has been some discussion of a car or vanpool to go out there on Friday. It is an all day drive. Speaking from experience, I can say that everyone will have a good time. Why not think about making a weekend of it.

The value of a user group, such as CATS, simply can't be assessed. Even between the last meeting and this one, the group has exercised its muscle and purchased many disk interfaces and 512K ram boards for the recently purchased QL's. The group discount is about 15%. The disk interfaces are \$114.95 and ram boards are \$133.95. At this writing 9 rams are paid for and 4 disks are paid

for. However, there is still time to get in on the action. I have received several calls from out of town to get in on this buy.

Please take advantage of your group. We are here for you (and us). Come on down to the New Carrollton Library and see for yourself!!

This meeting will have a variety of demos as usual. True multitasking can now be done on the QL by using QRAM or Taskmaster. We will demo both.

I have received about 30 QL motherboards, but some of them are missing chips. Those chips that are missing are in transit from England. They will hopefully be here before the meeting. The price of each board really won't be known until they get here, but they should be in the \$20 to \$35 price range. Hopefully they will be in the lower end. I have also received 15 working microdrives for the QL. They are \$25 each and are available if any member blows one.

# EDITOR'S CORNER

The first issue of the fifth volume of CATS' newsletter brings some changes! First of all, after four years of hard labor as editors of the newsletter, Mark and Sarah Fisher are taking a well-earned rest and have passed the torch over to me. They have created a tradition of excellence that we can all be proud of, making our monthly publication one of the finest in the U.S. Sinclair community, and I intend to maintain that standard and try to build upon it.

As always, of prime importance is your support, not only through subscribing to the newsletter, but by contributing to it. I am ready to receive your submissions in a

number of ways; on QL's Quill (microdrive cartridge or disk), or on the 2068's Mscript or Textwriter 2000 (cassette or Aerco disk), or in "hard copy" form, preferably 35 columns wide. If you see something interesting in a newspaper, magazine, or newsletter that concerns our machines, clip it out and mail it to me. Programs, articles, software and hardware reviews, humor --- I want it all! Don't worry about it if you are afraid that you don't "write well", fixing grammar is what editors are for! Just do your best, and I will polish your prose for you.

Currently I am looking for a person who will do a regular monthly column for each of the Sinclair machines (QL, 2068, & 1000). How about it? Anybody out there interested? Talk to me at (301)674-8560, or write me at 1316 Farrara Dr., Odenton, Maryland 21113.

John Riley

## SPECTRUM DISASSEMBLY

8600 00	NOP	8649 SF	LD B,A	8697 00	NOP
8601 3E1B	LD A,1B	864A 1600	LD D,00	8698 85	ADD A,L
8603 CDB15B	CALL SBB1	864C 19	ADD HL,DE	8699 82	ADD A,D
8606 3E17	LD A,17	864D 0603	LD B,03	869A 85	ADD A,L
8608 CDB15B	CALL SBB1	864F 7E	LD A,(HL)	869B 00	NOP
860B 3E1B	LD A,1B	8650 CDB15B	CALL SBB1	869C 86	ADD A,(HL)
860D CDB15B	CALL SBB1	8653 23	INC HL	869D 80	ADD A,B
8610 3E5B	LD A,5B	8654 10F9	DUNZ,3B4F	869E 86	ADD A,(HL)
8612 CDB15B	CALL SBB1	8656 01	POP BC	869F 00	NOP
8615 3E03	LD A,03	8657 04	INC B	86A0 84	ADD A,H
8617 CDB15B	CALL SBB1	8658 78	LD A,B	86A1 82	ADD A,D
861A 3E12	LD A,12	8659 FEC0	CP C0	86A2 81	ADD A,C
861C CDB15B	CALL SBB1	865B 38C7	JR C,8B24	86A3 00	NOP
861F 00	NOP	865D 00	NOP	86A4 82	ADD A,D
8620 0E00	LD C,00	865E 00	LD A,1E	86A5 80	ADD A,B
8622 0600	LD B,00	865F 3E1E	CALL SBB1	86A6 82	ADD A,D
8624 05	PUSH BC	8661 CDB15B	LD A,00	86A7 00	NOP
8626 CDBD5B	CALL SBB0	8664 3E00	CALL SBB1	86A8 80	ADD A,B
8628 47	LD B,A	8666 CDB15B	LD A,12	86A9 82	ADD A,D
8629 04	INC B	8669 3E12	CALL SBB1	86AA 80	ADD A,B
862B 3E01	LD A,01	866B CDB15B	INC C	86AB 00	NOP
862C 0F	RRCA	866E 0C	JR NZ,8B22	86AC 80	ADD A,B
862D 10FD	DUNZ,8B2C	866F 20B1	LD A,1E	86AD 80	ADD A,B
862F A6	AND (HL)	8671 3E1E	CALL SBB1	86AE 80	ADD A,B
8630 08	EX AF,AF	8673 CDB15B	LD A,1B	86AF 00	NOP
8631 7C	LD A,H	8675 3E1B	CALL SBB1	86B0 00	NOP
8632 0F	RRCA	8678 CDB15B	LD A,5B	86B1 F5	PUSH AF
8633 0F	RRCA	867B 3E5B	CALL SBB1	86B2 DB7F	IN A,(7F)
8634 0F	RRCA	867D CDB15B	LD A,0C	86B4 CB67	BIT 4,A
8635 03	AND 03	8680 3E0C	CALL SBB1	86B6 20FA	JR NZ,8BB2
8637 F658	OR 58	8682 CDB15B	LD A,1B	86B8 F1	POP AF
8639 67	LD H,A	8685 3E1B	CALL SBB1	86B9 D37F	OUT (7F),A
863A 46	LD B,(HL)	868A 3E13	LD A,13	86BB C9	RET
863B 08	EX AF,AF	868C CDB15B	CALL SBB1	86BC 00	NOP
863C 78	LD A,B	868F 09	RET	86BD 3EBF	LD A,8F
863D 2003	JR NZ,8B42	8690 87	ADD A,A	86BF 90	SUB B
863F 0F	RRCA	8691 87	ADD A,A	86C0 DAF924	JP C,24F9
8640 0F	RRCA	8692 87	ADD A,A	86C3 CDB022	CALL 22B0
8641 0F	RRCA	8693 00	NOP	86C6 C9	RET
8642 E607	AND 07	8694 83	ADD A,E	86C7 00	NOP
8644 21905B	LD HL,5B90	8695 86	ADD A,(HL)	86C8 00	NOP
8647 87	ADD A,A	8696 83	ADD A,E	86C9 00	NOP
8648 87	ADD A,A				

# SCREEN\$ DUMP SOFTWARE FOR THE (RADIO SHACK) TANDY 105 PRINTER

For over a year and a half I have been using the TANDY 105 printer for all my personal and business printing duties and have found the unit to be extremely reliable and an excellent value for the thrifty (cheap) TIMEX COMPUTER owner. The printer can be purchased for around \$200 (Canadian) on sale and I imagine a lot less in the States. Any RADIO SHACK store carries replacement ribbons and can help if repairs are required. The unit comes with PARALLEL and SERIAL Interfaces (the SERIAL Interface should work directly with the QL and I hope to test this as soon as I build my QL kit) making the printer very flexible.

The only problem I had with the unit is it's strange GRAPHICS MODE. The printer does graphics with only seven of the eight pins and requires the bit pattern to be flipped and have bit 7 set. Because of this strange setup getting SCREEN\$ dumps to the printer meant writing my own screen dump program.

The following program is a modified SPECTRUM program originally printed in "YOUR SINCLAIR" magazine. The result is a full 8 1/2" \* 11" sideways screen dump that reproduces colors as different shades of gray (see sample print out). The code is 200 bites long and sits in the printer buffer so will not take any RAM used by other programs. I required the program to work in SPECTRUM and 2068 mode so I have enclosed both disassemblies (I use Ray Kingsley's HOT Z-AROS). Please note that the disassemblies are located at 8B00h and not from the printer buffer location 5B00h - trying to print the disassembly from the printer buffer location to the 2040 printer would cause the code to be lost and nothing printed. Load the code using HOT Z or any other assembler into location 5B00h and save to disk or tape. Use a BASIC loader program to load the code into the printer buffer location and when you want to print a screen call it with "RND USR 23296".

I think the TANDY 105 printer is great value for the money and with this utility you can make it even more usefull.

## 2068 DISASSEMBLY

DAN PINKO

```

0000 00      NOP
0001 3E1B    LD A,1B
0002 00      CALL 5BB1
0003 00      LD A,17
0004 3E17    LD A,17
0005 00      CALL 5BB1
0006 3E1B    LD A,1B
0007 00      CALL 5BB1
0008 3E1B    LD A,1B
0009 00      CALL 5BB1
0010 3E5B    LD A,5B
0011 00      CALL 5BB1
0012 3E1B    LD A,1B
0013 00      CALL 5BB1
0014 3E03    LD A,03
0015 00      CALL 5BB1
0016 3E1B    LD A,1B
0017 00      CALL 5BB1
0018 3E12    LD A,12
0019 00      CALL 5BB1
0020 00      NOP
0021 00      LD C,00
0022 00      LD B,00
0023 00      PUSH BC
0024 05      CALL 5BB0
0025 00      LD B,A
0026 47      INC B
0027 00      LD A,01
0028 00      RARC
0029 00      DJNZ,8B20
0030 00      AND (HL)
0031 00      EX AF,AF
0032 00      LD A,H
0033 00      RARC
0034 00      RARC
0035 00      RARC
0036 00      AND 03
0037 00      OR 5B
0038 00      LD H,A
0039 00      LD B,(HL)
0040 00      EX AF,AF
0041 00      LD A,B
0042 00      JR NZ,8B42
0043 00      RARC
0044 00      RARC
0045 00      RARC
0046 00      AND 07
0047 00      LD HL,5B90
0048 00      ADD A,A
0049 00      ADD A,A

```

```

0049 5F      LD E,A
0050 1600    LD D,00
0051 00      ADD HL,DE
0052 00      LD B,03
0053 00      LD A,(HL)
0054 00      CALL 5BB1
0055 00      INC HL
0056 00      DJNZ,8B4F
0057 00      POP BC
0058 00      INC B
0059 00      LD A,B
0060 00      CP 00
0061 00      JR C,8B24
0062 00      NOP
0063 00      LD A,1E
0064 00      CALL 5BB1
0065 00      LD A,0D
0066 00      CALL 5BB1
0067 00      LD A,12
0068 00      CALL 5BB1
0069 00      INC C
0070 00      JR NZ,8B22
0071 00      LD A,1E
0072 00      CALL 5BB1
0073 00      LD A,1B
0074 00      CALL 5BB1
0075 00      LD A,5B
0076 00      CALL 5BB1
0077 00      LD A,0C
0078 00      CALL 5BB1
0079 00      LD A,1B
0080 00      CALL 5BB1
0081 00      LD A,13
0082 00      CALL 5BB1
0083 00      RET
0084 00      ADD A,A
0085 00      ADD A,A
0086 00      ADD A,A
0087 00      NOP
0088 00      ADD A,E
0089 00      ADD A,(HL)
0090 00      ADD A,E

```

```

0091 00      NOP
0092 00      ADD A,L
0093 00      ADD A,D
0094 00      ADD A,L
0095 00      NOP
0096 00      ADD A,(HL)
0097 00      ADD A,B
0098 00      ADD A,(HL)
0099 00      NOP
0100 00      ADD A,H
0101 00      ADD A,D
0102 00      ADD A,C
0103 00      NOP
0104 00      ADD A,D
0105 00      ADD A,B
0106 00      ADD A,D
0107 00      NOP
0108 00      ADD A,B
0109 00      ADD A,D
0110 00      ADD A,B
0111 00      NOP
0112 00      ADD A,B
0113 00      ADD A,B
0114 00      ADD A,B
0115 00      NOP
0116 00      NOP
0117 00      PUSH AF
0118 00      IN A,(7F)
0119 00      BIT 4,A
0120 00      JR NZ,8BB2
0121 00      POP AF
0122 00      OUT (7F),A
0123 00      RET
0124 00      NOP
0125 00      LD A,8F
0126 00      SUB B
0127 00      JP C,2B52
0128 00      CALL 2609
0129 00      RET
0130 00      NOP
0131 00      NOP
0132 00      NOP
0133 00      NOP

```

## INTRODUCING VOLUMES SIX AND SEVEN IN THE 2068 SOFTWARE LIBRARY

After several months of collecting new software from contributors across the country, here are the latest additions to the 2068 library! The sixth volume is a "mixed bag" for the 2068, containing something for everyone. The seventh volume is a Spectrum-only collection, requiring as Romswitch or other Spectrum emulation to work. But enough of this preamble, let's get on to the program descriptions.....

### Volume Six --- Mixed Bag

**MTOS (utility)** - This is a program development tool that can come in handy for anyone who is creating a new program or modifying an old one. For a fuller description see the letter later in this newsletter by its author, CATS member T.G. Morley. It is available to CATS members only by special arrangement with Mr. Morley, but non-members can purchase through Sharp's of VA.

**TEXTYPE (word processor)** - A nice little program that lets you print out your hardcopy in any of four different typesstyles (regular, bold, modern, or italic) if you use a 2040 printer. With a little creative wangling it can be adapted to print out to an 80-column printer, too.

**3D WORD (graphics)** - Creates 3d words out of little box-girder-like udgs for use in article titles, etc. Look for an example in one of the headlines in this issue.

**3D DRAW (graphics)** - a program which will, if you learn its quirks, draw for you a wide variety of 3d objects on an x-y grid. Its fun to watch.

**CURSOR (demo)** - Will teach you how to put other symbols inside the 2068 flashing cursor.

**DUB (utility)** - IF you have a good pair of tape recorders and IF you get the volumes adjusted right, this program will PERFECTLY COPY most any program by reading the signal coming into the EAR port, cleaning it up, and feeding it directly out through the MIC port. This could be the answer to the prayers of those of you having trouble making archival copies of your programs!

**ANIMATE (demo)** - Shows how you can use BASIC to give life to a spritely (pun!) little marching man.

**FILL (demo)** - Fills cursor-selected spaces with color, pixel by pixel. Rather slow, but there is a lot to learn from examining the listing.

**BLOKMAN (game)** - a slightly watered down version of the Spectrum game that was included in Volume 4, this time for the 2068. Joystick in left port.

**PACMAN (game)** - It had to happen sooner or later! This version would be exciting to persons 6 years and younger. Use arrow keys.

**BELLTOWER (game)** - Now this one is pretty tough! A variation on the platforms and ladders type of game. It contains a very nice user-programmable keys function which could come in handy in your own programs.

**GHOTI (game)** - You are a fish, eating bubbles and avoiding hungry turtles to survive. Use arrow keys.

**ARTIC EXPLORER (game)** - Avoid the pitfalls and win through to the North Pole. Controls: O=Left, P=Right, O+CS (capshift)=Jump Left, P+CS=Jump Right.

**PAWS (game)** - You are a cat. Eat the mice but avoid the rats. Use RIGHT joystick port.

**WAGONERS (game)** - A faster-than-the-speed-of-snails race between three wagons. You bet on the outcome.

**CURSOR ADVENTURE (text adventure)** - Hey! Our first text adventure!

**WORD SQUARE (game)** - a hidden-word puzzle generator, with less capacity than the one found in Volume One, but faster in producing the result.

**ADVERTISING DISPLAY (utility)** - Large letters flow from right to left across the screen in an unending loop. You can input the message that the letters spell out. A Spectrum version is in Volume Seven.

**SPANISH TUTOR (educational)** - A "99% complete" version of the program that was included in Volume 2.

**SPANISH BUILDER I (educational)** - Vocabulary practice for what you learned from SPANISH TUTOR.

**SPANISH BUILDER II (educational)** - More vocabulary practice!

### VOLUME SEVEN - MORE SPECTRUM SOFTWARE

**WAR OF THE SHIRES (adventure game)** - This text-and-graphics adventure is a sort of poor man's War in the East. You can manipulate several characters and their armies to try and defeat the enemy. Well done and a challenge to play.

**KRAKATOA 2012 (game)** - The Krakatoa volcano is about to blow up again, because some nasty aliens have been fooling with it. Your mission - rescue the islanders and destroy the aliens. Use arrow keys.

RIFLE RANGE (game) - A shooting gallery game. This one is popular with children. Use any key to fire the rifle.

SCROLLS (utility) - Does a very fast vertical scroll within a defined window on the screen.

SCROLL (utility) - Another type of scroll that "creeps" a block of text across the screen.

CAPMAN (game) - The Spectrum version of Pacman. Written in machine code, it is much faster than the 2068 version.

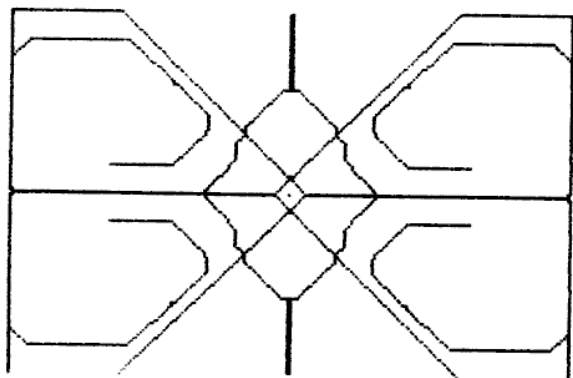
ADVERTISING DISPLAY (utility) - Same as the program of the same name described in Volume Six.

CLONE (utility) - This is a GREAT UTILITY!! It is similar to the clone utilities on the QL, in that it loads in the program to be cloned a section at a time, then prompts you to put in a fresh tape and save that section. The only programs that balk it are the ones that I can't crack either.

SPECTRAMONITOR (utility) - a nicely done disassembler with mnemonics for the Spectrum.

FORTH (language) - An implementation of forth, for those interested in learning it. The command "DLIST" will list the dictionary that you have to work with.

Members of CATS can get a copy of the new software by sending \$2.00 to John Riley, 1316 Farrara Dr., Odenton, Maryland 21113. The money covers the cost of the tape and mailing. Non-members can receive CATS software via swapping other public domain programs that we do not yet have. For details and a full listing of the 2068 library send a large SASE to the above address.



A=ARC F=FRAME C=CPY S=SUPERFILE  
M=MAGNIFY P=PAPER I=INK 1&2=MENU

Drawn using "Grafixx" from the CATS 2068 software library. Artwork by Abe Riley, age 6.

## Q (L) TIPS

Are you getting flooded out by those fiddly little microdrive cartridges that don't seem to fit in anything nicely? Do you dislike the "wallets"? Well, here are a couple of alternatives for you. #1- break out the sprocket tabs from a plastic cassette case, and you will have a transparent carrying case for 3 cartridges. Note: sometimes you have to put a rubber band around the case to keep it closed. #2- Paul Bingham recently suggested in Quantum Levels that you could take several cassette cases apart, glue the transparent sections together in stairstep fashion, and create a storage rack that would hold 3 cartridges on each level. #3- Go to an office supply store and buy a business card box for about \$4. This box will hold 30 cartridges standing on end, and has a see-through top so that you can read the contents at a glance.

"But", you say, "I'm going crazy cutting little fiddly pieces of tape to label the ends of my little fiddly cartridges!" No problem. While you are at the office supply store buying your business card box, hop over to the typewriter supplies and buy some 1/6" cover-up strips, made by Avery and supplied in sheets or rolls. They just happen to exactly fit the indentation at the end of the cartridge.

### A NOVELTY TS 2048

An interesting and rather "pretty" bug exists in the way the DRAW command executes its arc-making facility.

Try this short routine:

10 INPUT "Any odd number";n

15 CLS

20 PLOT 75,50:DRAW 100,100,PI \*n

30 GOTO 10

Having RUN this program, try adding the following line. 5 OVER 1

Try inputting these numbers: 253, 237, 375, 287, 157, and EXPERIMENT!!

From the L.I.S.T. newsletter

## Digital Imagizing - Part I

By Eric Michaud

Have you ever wanted to have some REAL pictures for your 2068? I don't mean your usual pictures from your typical drawing programs but real pictures, such as your face, for example. This tutorial will show you how to hook up a video camera to your 2068 with a fairly simple hardware attachment.

I chose to wire-wrap my prototype and it worked fine but be sure to keep wires as short as possible in the op-amp section of the circuit. My version lies in the cartridge port but it would be easy enough to transfer to the rear connector if desired. Other than that I will leave the actual construction up to you.

The circuit can be divided into two parts. The interface and the digitizing circuitry. The interface section simply provides 8 inputs and 8 outputs. Only 4 outputs are actually used along with 2 inputs. The extra lines could be used for your own projects. I chose to map the interface to IO port 00 but this could easily be changed to another port if it interferes with another piece of hardware. Small software changes would have to be made to accomodate for this change. The digitizing section of the circuit essentially separates the video sync signal and the actual picture data from your video source and by use of the LM311's, the picture is converted to a digital format. Then through timing accomplished by the 74LS74N and the LM555, the picture is sampled at appropriate times to collect the image.

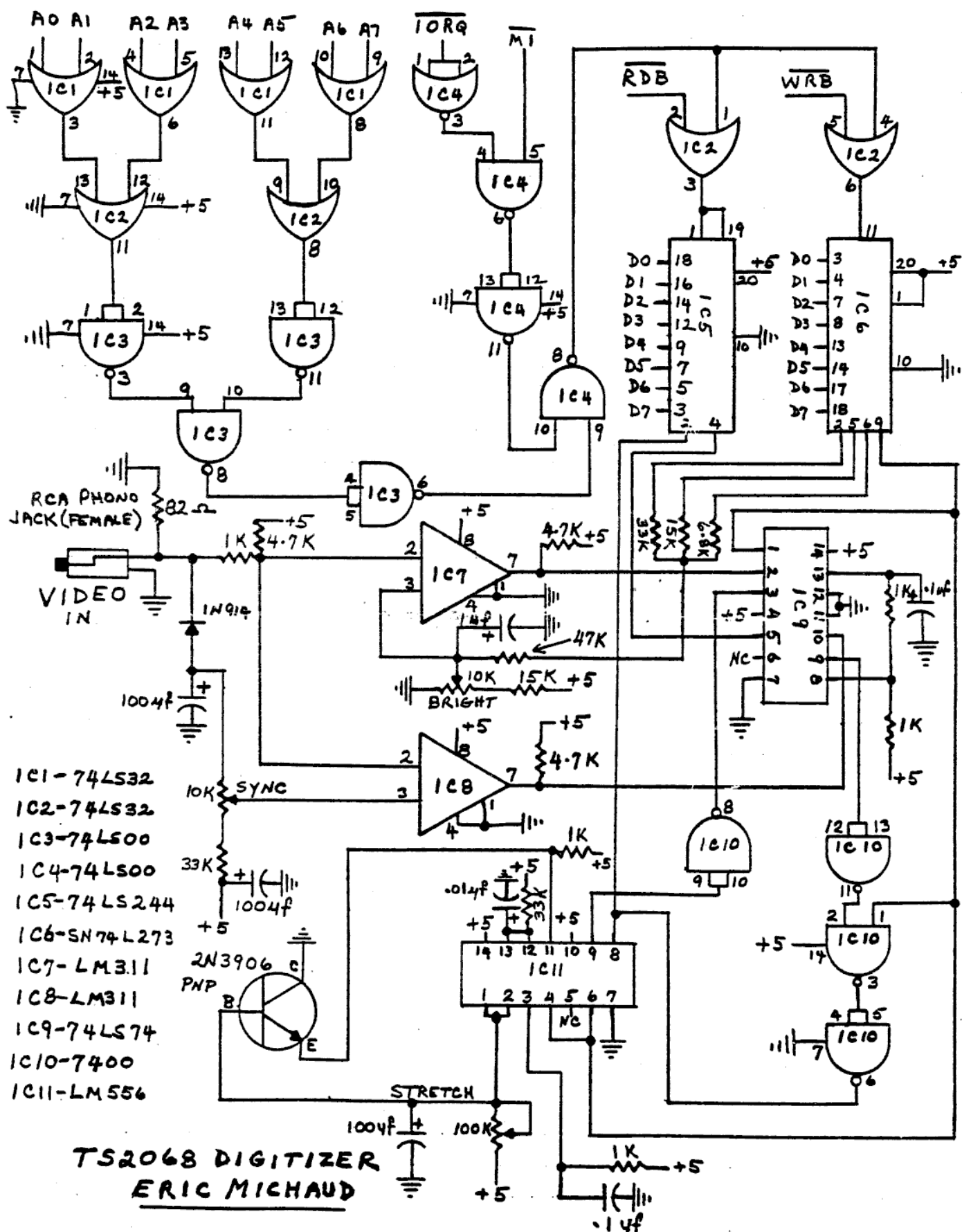
It is important to note that you must have a still video source as it takes 5 seconds to collect one image. Also, your video source must be capable of driving a monitor. RF video such as from a ZX81 will NOT work. A VCR or video camera with a MONITOR OUT jack will work. For testing purposes, I recommend another computer with a monitor output plug or a VCR with shake-free freeze frame. There are three controls on the digitizer. The BRIGHTNESS knob sets the brightness of the image. The STRETCH knob allows you to horizontally expand or compress the image. Finally the SYNC knob is used to place yourself 'in sync' with the incoming video source.

I will leave you with the schematic for now and in the next article, setup, theory and use will be discussed. In the meantime, I suggest that you obtain the driver software from the club library. The program is called EyByN1.B1.

This article from Sinc-Link, the newsletter of the Toronto T/S User's Club.



**DIGITIZED PICTURES BY DAN PINHO**



REDRAWN BY GFC 87 01 03

CATS - 7 - APRIL

# Vu-Calc

## AS PETTY CASH

Our own Akin Olowofoyeku has been working on a number of interesting applications for the 2068's VuCalc. If you like this one, be happy! There are several more yet to come. How about the rest of you? Do you have some unique uses for VuCalc that you can share? Or how about some Archive applications from you QL users? Send them in, the editor is hungry for material!

Anyway, here is Akin's use of VuCalc as a petty cash register.

Location: Instruction

a1: #f,a,1

f1: "=====

f2: #r,f1,f2:f12

f14: #r,f1,f14:f18

e5: "PETTY CASH

e7: "REGISTER

e12: #f,12,r

e12: "1986 (or current year)

e15: "EXPENSE REGISTER

g1: "VOUCH#

g2: "DATE

g3: "CODE

g4: "DESCRIPTION

g8: "PAYMENT

g10: "RECEIPT

g12: "BALANCE

g14: "POSTAGE

g16: "DELIVERY

g18: "MISC.

h4: "BALANCE FORWARD

i3: #f,3,i,1

i3: 0

j3: #r,i3,j3:av3

i8: #f,8,\$,r

i8: 0

j8: #r,i8,j8:av8

i10: #f,10,\$,r

i10: 0

j10: #r,i10,j10:av10

h12: #f,12,\$,r

h12: 0

Location: Instruction

i12: h12+i10-i8

j12: #r,i12,j12:av12

aw1: "=====

aw2: #r,aw1,aw2:aw12

aw14: #r,aw1,aw14:aw18

ax6: "TOTALS

ax8: &i8:av8

ax10: &i10:av10

ax12: av12

i14: #f,14,\$,r

i14: (i3=1)&i8

j14: #r,i14,j14:av14

f14: "1

i16: #f,16,\$,r

i16: (i3=2)&i8

j16: #r,i16,j16:av16

f16: "2

i18: #f,18,\$,r

i18: (i3=3)&i8

j18: #r,i18,j18:av18

f18: "3

ax14: &i14:av14

ax16: &i16:av16

ax18: &i18:av18

a1: "Petty Cash Journal >#g,g1

b1: "Expense Record >#g,e14

d1: "Save,#s :Load,#l :Print,#q

e1: "Petty Cash Check Code=0

a6: "AKO ENTERPRISES

b6: "1613 DAYTON ROAD

c6: "ADELPHI, MD 20783

Petty Cash Journal >#g,g1

Expense Record >#g,e14

AKO ENTERPRISES

1613 DAYTON ROAD

ADELPHI, MD 20783

Save,#s :Load,#l :Print,#q

Petty Cash Check Code=0

PETTY CASH

REGISTER

1986

EXPENSE REGISTER

VOUCH#	DATE	CODE	DESCRIPTION	PAYMENT	RECEIPT	BALANCE	POSTAGE	DELIVERY	MISC.
			BALANCE FORWARD			0.00	1	2	3
500	1:1	0	Established Fund	0.00	100.00	100.00	0.00	0.00	0.00
100	1:2	1	Postage for sales	8.00	0.00	92.00	8.00	0.00	0.00
101	1:4	1	Telegraph	8.00	0.00	84.00	8.00	0.00	0.00
102	1:8	2	Taxi fare	10.00	0.00	74.00	0.00	10.00	0.00
103	1:10	3	Coffee for O/T	4.00	0.00	70.00	0.00	0.00	4.00
104	1:15	1	Stamps	18.00	0.00	52.00	18.00	0.00	0.00
105	1:25	3	Window cleaning	12.00	0.00	40.00	0.00	0.00	12.00
		0		0.00	0.00	40.00	0.00	0.00	0.00
501	2:1	0	Replenished Fund	0.00	60.00	100.00	0.00	0.00	0.00
		0		0.00	0.00	100.00	0.00	0.00	0.00
		0		0.00	0.00	100.00	0.00	0.00	0.00
			TOTALS	60.00	160.00		34.00	10.00	16.00

CATS - 8 - APRIL



## MTOS, A 2068 UTILITY

Dear Mr. Riley:

...Here is a short writeup of MTOS and it's use. The program is generally self-explanatory and really has only one use.

The programs that were on the menu in MTOS were included simply to show it's use; however, I believe all of them are self-explanatory or are user-friendly. If you'd like to include my name and address feel free to do so (2217 E. Riverside Dr., Truth or Consequences, NM 87901). I will be happy to help anyone who writes.

Sincerely,  
T.G. Morley

\*\*\*\*\*

MTOS is a self-modifying program that will add a newly entered or loaded program to its menu, without worrying about changing line numbers.

In the beginning I needed several programs to help in constructing a Basic program. I got tired of loading a tape every time I needed help and MTOS is the result.

The working program is line #1 thru 216 and 9997 thru 9999.

Any alteration of these lines will destroy the program. With your imagination though I'm sure that you can improve upon it.

MTOS can also be used as a "library shelf" to hold several games or perhaps a disassembler and a monitor and assembler.

This sounds like a winner; how about a program in which it is necessary to consult pages of data or graphs in any order at any time? Punch up the menu, call the correct data or graph, and go back to the original program with the information that you need.

The instructions are simple:

- 1..to load or enter code select "merge" on the menu. Most of your work is done from "merge".
- 2..while you are in "merge" you

may work on the program as if it were the only one in the machine.

3..after the merge is completed you can call up other utilities and still bring up the last program on the meny to work on.

4..to delete a program or group of programs call up the lowest, then (DELETE, 9996 ENTER) and (GOTO 9998 ENTER).

5..to change the last meny entry (GOTO 9998 ENTER) and enter a name as long or longer.

6..(SHIFT BREAK) will goto menu, holding (SHIFT BREAK) will break to Basic.

7..the rest is up to your imagination -- enjoy!

8..CATS members only may use this copy of MTOS without copyright infringement.

THE NEW YORK TIMES,

WEDNESDAY, FEBRUARY 18, 1987

### New Sinclair Computer Set

LONDON, Feb. 17 (Reuters) — Sir Clive Sinclair, the British inventor who was forced to sell his computer empire after it fell on hard times last year, today introduced what he said was the world's smallest and most portable personal computer.

Described as the "first portable with full personal computer facilities," Sir Clive's new Z88 weighs less than 2 pounds, measures 11½ by 8¼ inches and has a memory capable of storing the entire works of Shakespeare.

Introduced at a computer exhibition in Birmingham, England, the I.B.M.-compatible machine sells for \$350 — at least two-thirds cheaper than many of its competitors. Sir Clive, whose disastrous venture into electric cars with his miniature C5 tricycle failed to catch the public's imagination, sold his previous computer company and even the Sinclair name to a rival computer maker, Amstrad, last year for \$7.7 million.

## Resources and Products for the QL

By: N.A. Pashtoon

The last two months I called up various vendors and asked for their catalogs of QL products. The information supplied by these vendors is tabulated and categorized in the tables presented below. The information from two vendors is missing from these tables. The vendors are Brice Road Pharmacy, and Curry Computer. Brice Road Pharmacy came to my attention too late and I did not ask for their product catalog. Curry Computer, even though I asked for their catalog, I have not the information yet. I think they mailed the info. to my previous address. I talked with SUNSET Electronics. John Woburn told me that yes he had QL products, but that he was getting out, and no he is not selling his existing stock at "fire-sale" prices. He did not send me his brochure. Zebra Systems is out of the QL market and sold their existing stock at below cost to another vendor. We did not list the A+ Computer prices for some of the products that they carry. Since you already had their brochures and their was a very low price in effect for LIST members, I assumed that you have already taken advantage of the opportunity.

The prices in the tables is based on the vendor brochures supplied to me mostly before X-mas. As such some of the prices may be only X-mas specials. In other words it is a good idea to check with the vendors first. The price tabulations shown are just for reference, and they were prepared by rounding up the prices shown in the vendor brochures. Don't forget that these prices are not the last word. By this I mean, suppose that you were planning to buy three or four items for your computer, you can call any of the listed vendors, and probably work out a special deal. If you are in the market for purchasing disk drives for your computer, I suggest that you exercise caution. The prices advertised by QL vendors may not be the lowest. To give you an example the Amdek 3", casced dual drives with power supply is advertised by some TIMEX vendors for a price of close to \$250.00. The same exact product is available for \$73.00 from

Peripherals Direct Ltd.  
P.O. Box 4301  
Northbrook, Ill. 60065  
312-498-9244

If you are concerned about the availability of the 3" diskettes, there is no reason to worry. Any of your local SEARS stores can supply the diskettes.

Finally, the tabulation under books for the QL, I have listed the titles and prices from Quantum Computing. All the other vendors carry some of these titles, and some times at lower prices, than Quantum Computing. I visited Quantum Computing and spent a few hours with Frank Toumey, the owner. He is knowledgeable, TS enthusiast, and a professional programmer. I was surprised to find a powered up TS1500 in his basement, as well as a TS2088. Any how, I discovered that even though his brochures advertise all these titles for the QL, he actually had only six or seven titles in stock. The moral is, before ordering, make sure that the vendor has the item you need in stock. If the item is not in stock, it will probably take a couple of months for the vendor to get it from England. Don't forget, that you can also order any of the QL stuff directly from England, using plastic, probably faster and even save some money in the process. I do like to apologize in advance if there are any transcription errors in the tables.

### QL Publications

A) Quantum Levels  
Quantum Levels is the only QL specific U.S. Based publication. Member Tom Bent is the editor. I had a chance to talk with him on the phone a few times. He was very pleasant, knowledgeable, and helpful. He sent me the first two issues of Quantum Levels as samples. The bi-monthly publication caters to the need of both beginners as well as advanced users. Since up to now three issues are out, I would urge you to subscribe from vol. 1, no. 1 ( Aug 1988) issue.

Subscription is \$18.95 a year. The address is  
Quantum Levels  
P.O. Box 64  
Jefferson, N.H. 03583

### B) QL World

QL World is the only British magazine specifically dedicated to the QL. It seems not to be plagued (yet!) with all the juvenile nonsense that other Sinclair related British magazines. The articles are generally informative and do cater to the needs of beginners, advanced programmers, as well as hardware types. The yearly subscription can be arranged in the \$30 to \$40 range by any of the dealers. I am mentioning this, because if you deal directly with the QL World you might be short say around \$60. ( By the way why I do I get the distinct feeling that most of the British suppliers think of North Americans as suckers? Why do they always have much higher rates for North America!?)

## Monitors

### A) Best Buy

The Best Buy in monitors ( If you can find it in your local area) is the TAXAN B210 RGB ( analog ) monitor. It is priced from \$100 to \$180. In my area the Child World in Selden had it. I have also seen it some places in NYC. The overcanning problem on this monitor is not serious. The colors are very nice. I have used the unit with my TS2088 for two years, and I am very happy with it. Note that the Monitor which was sold by Sinclair was also manufactured by TAXAN. Don't forget that this is an analog RGB monitor. To make it compatible with the TTL RGB from your computer, all you need is three 390 Ohms resistors (1/8 watts will do), which you will insert in series with the R, G, and B lines coming out of your computer. I installed these resistors inside the DIN connector. If you don't install the resistors you will be over driving the monitor which may not be good for its long term health.

### B) Commodore 1902

The 1902 except for the front bezel which is different, is exactly the same monitor as the Magnavox unit so highly touted by some QL vendors. It does have some extra features like comb filter, and extra inputs. The list price is \$20 higher than the Magnavox. Before you buy it though, take your computer to any of the dealers. Make sure that you are happy with the display. Since this monitor is widely available I am sure you will be able to get some good prices on it.

### C) High priced monitors

I had a chance to test the QL with some expensive monitors such as the NEC Multisynch, Princeton Graphics HX12, and the Commodore Monitor accompany. ing the Amiga Computer. It is hard to convey the high quality, very distinct image on these wide bandwidth monitors. The NEC Multisynch did not even require any adjustments. There was just no over scanning.

## Services

### A) Repairs

In warranty repairs are provided by A+ Computers. Out of warranty repairs are also provided. You better call them up and talk with their Technical Person. He is available for consultation weekdays from 3:00 to 5:00 p.m.(EST). The experience of LIST members show that the people at A+ are very courteous. I don't see users having any problem dealing with them. Your other source of repairs is sending your computer to England. You can find the ad

### B) BASIC Program Transfers

If you need to transfer your long BASIC programs from your TS2088/ Spectrum to QL, and you hate to type, send a copy of the tape to our member Gene, and he will perform the service for you for a nominal fee.

Eugene Petruva  
358 Railroad Ave.  
Bridgeport, CT 06604

## User Groups

### A) QUINTA

QUINTA is the newsletter of the Independent QL Users Group (IQLUG) published in Britain for the last three years. The format of the newsletter is as letters to the editor. A typical issue has more than 30 pages of some excellent material. More importantly the group has built up a gigantic public domain library (>6 MBbytes), which can probably answer the needs of most any user. The Library representative in the U.S. is member Tom Bent. For membership and other info

Brian Pain  
24 Oxford Street  
Stony Stratford  
Milton Keynes  
United Kingdom MK11 1JU  
Note that they accept plastic for membership (Phone 0908-364271).

### B) North American User Groups

A network of the 35-40 User Groups in North America are supporting the T/S line of computers. Many of these have newsletters, which publish material provided by any of their members. For example here at LIST we would like to support the QL starting with this issue. At this point in time more than 30% of our members own a QL. As the learning curve of our members goes up we will be providing both software and hardware support. For the last few months we have noticed that ZXAppeal ( Vancouver Sinclair Users Group) have published some nice stuff about QL. This is a very good newsletter, which seems to be leapfrogging from ZX81 to QL. The last few issues of RAMPTOP has also carried a column about QL. SINC LINC, a Toronto TIMEX-Sinclair Users Club publication is another good quality newsletter which has carried material on the QL in the past. It is worth mentioning that SINC LINC is the only newsletter which provides regular coverage on the Larken Disk Interface for the ZX81 and the TS2088/Spectrum.



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- bench vases
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- transformers
- resistors
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(301) 441-9009



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College Park, MD 20740

## Vendor Addresses

In the product directories presents the last few pages, the vendors were designated by alphabetical characters. In what to follow the alphabetical designation of each vendor, as well as their addresses and phone numbers are provided.

### A

QUANTUM COMPUTING  
P.O. BOX 1280  
DOVER, N.J. 07801  
201-328-8840

### B

Sharp's Inc.  
Rt. 10, Box 459  
Mechanicsville, Va. 23111  
804-740-1064 (9:00 am-4:30pm)  
804-730-9697 (5:00pm-11:00pm EST)  
Visa & MC accepted

### C

Variety Sales  
325 West Jersey St.(2-D)  
Elizabeth, N.J. 07202  
201-289-5099

### D

C.W. Associates  
419 N. Johnson Street  
Ada, Ohio 45810  
419-634-4874

## Hardware

A	B	C	D	E	F	G	H
256 K Mem. Exp.		\$180	\$165	\$230		\$170	\$200
412 K Mem. Exp.	\$165	\$220				\$270	
"Q++" Exp. Chaus						\$374	
QL Hard Disk						Call	
Memodisk(512K-Disk	\$280						
& Centronics I/F)							
Melkita I/F							
Board	\$357						
Cemasa Disk I/F	\$125	\$130	\$160			\$180	\$180
CST Disk I/F	\$125		\$180	\$290		\$300	\$150
Delta Disk I/F		\$180				\$150	\$250
"-125K							
Exosmy Disk I/F				\$50		\$50	\$40
Dual 5" Disk Drive			\$35				
5.25" dual DSQD			\$Call				
Disk Drives	\$277	\$280					\$280
3.5" dual DSDD							
Disk Drives	\$225	\$280				\$280	
Dual 3.5"		\$370				\$350	
QL Epson Barter						\$170	
Centronics Pt./I/F	\$45	\$45	\$35	\$50		\$50	
Qeasid/Qpmst	\$150						
JS ROM	\$50					\$50	
QL ROM Cartridge	\$30	\$9	\$10	\$11		\$13	\$12
Battery Time Clock							
Microd. cas/tpack	\$9						
Cartridge Case	3/81						
QL ICE. Morse	\$130	\$120		\$110		\$120	\$100
300/1200 Baud	\$100						\$150
Modem-Software	\$48	\$50	\$50	\$50		\$50	\$45
Package of above two	\$100		\$60	\$60		\$60	\$60
300 Baud Modem							
300 " " with adaptor							
+ software							
1200 Baud Smart Mod.			\$160			\$100	\$100
with adapt. & software						\$200	

## Business

A	B	C	D	E	F	G	H
TAX-I-QL(1988)	\$13						
QL Entrepr.	\$46	\$40	\$30	\$35	\$28	\$40	\$41
QL Project Plan.	\$46	\$40	\$30	\$35	\$28	\$40	\$41
QL Decision Mak.	\$46	\$40	\$30	\$35	\$28	\$40	\$41
LQ Recon	\$25						
QSpell	\$27	\$32	\$27	\$33	\$25	\$40	\$30
QL Appl. Diary	\$30		\$23	\$25		\$40	\$35
Front Page			\$Call				
Quil v 2.3	\$10						
Abacus v 2.3	\$10						
Easel v 2.3	\$10						
Archive v 2.3	\$10						
Q-Calculator	\$16						
Archiver	\$25						
Integ. Bus. Accnta.		\$150				\$16	
Mail Merge	\$23	\$25	\$22	\$25		\$20	\$30
Sign Designer			\$27			\$140	
Mailing List							
Stock Control						\$25	
Tasprint QL							\$30
Organiser							\$30

## Home and Self-improvement

A	B	C	D	E	F	G	H
Qmonix Keyboard							
Drill Sargent	\$25						
Touch 'N' Go							
Typing Tutor	\$33			\$25		\$30	\$25
Morse Code Tutor			\$15	\$17			
QL Gardener			\$20	\$25		\$40	\$25
COSMOS (id. stars)	\$35	\$23	\$21	\$25		\$22	\$25
QL Home Finance				\$25		\$30	\$25
QL Kitchen Aid	\$20						

## Languages / Compilers / Assemblers & OS

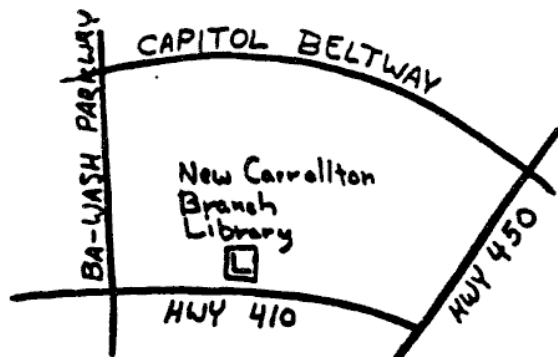
A	B	C	D	E	F	G	H
68K/OS							\$150
QL-Assembler		\$46			\$30	\$46	\$50
Metacomco's Assem.	\$95	\$100	\$40	\$46		\$150	\$130
" Lattice C			\$110			\$120	\$90
CST C						\$90	
Metacomco's LISP	\$67	\$70	\$70	\$80		\$80	\$80
" Pascal	Call	\$80	\$85	\$86		\$90	\$100
" BCPL	\$67	\$70	\$70	\$80	\$76	\$80	\$45
Forth-83							
Super Forth	\$42						
Prospero Pascal	\$100						
Prospero Fortran							
F-77	\$100						
APL		\$100	\$110			\$150	\$80
Supercharge(Basic)	\$67	\$70	\$70	\$90		\$90	
Turbo (Basic)	Call	\$80					
Q-Liberator(Basic)							

NEXT MONTH... MORE QL RESOURCES!

Network Information  
 Timex SIG on CompuServe: Wednesday night, 10:00 PM Eastern time  
 (Go Club)  
 QZX BBS: (505) 522-7081 FIDO net 15, node 6  
 -- " -- East coast: (703) 547-4815 FIDO net 18, node 9

Club Information  
 The Capitol Area Timex/Sinclair User's Group (CATS) is a non-profit special interest organization dedicated to serving the interests on those who own, use or are interested in learning more about the Timex/Sinclair family of personal computers.  
 The official contact person for CATS is TOM BENT: (301) 730-7187  
 Monthly meetings are held from 12:00 to 5:00, at the second Saturday of each month in the large meeting room of the New Carrollton Branch Public Library.

CATS Newsletter  
 P.O. Box 725  
 Bladensburg MD 20710



# COME TO OUR MEETING!

The next meeting of C.A.T.S. will be held on:

Saturday, April 11 1987

12:00 PM Hardware Meeting  
 2:00 PM General Meeting

At: New Carrollton Public Library  
 7414 Riverdale Road (Hwy 410), New Carrollton, MD

IF YOU ARE NOT A MEMBER OF CATS, THIS IS THE ONLY ISSUE YOU WILL RECIEVE  
Dues = \$18.00 per year, per family.

# First Class